PROTECTED SEAL AND RELATED METHODS FOR SEALING FLUID IN POWER GENERATION SYSTEM

Abstract Of The Disclosure

An apparatus having a slidable seal and related methods to prevent leakage of hydrogen gas or other fluids in a power generator is provided. The seal can connect to a high-current conductor when slidably contacting the surface of a fluid channel formed around the conductor. The seal slidably moves relative to and maintains contact with the surface of the fluid channel. The seal preferably includes a seal body having an abrasion abatement layer of soft metal to prevent abrasions of the seal surface as it slidably moves relative to the fluid channel. The seal can include at least one sealing gasket positioned to fit within a sealing gland formed in the fluid channel. Alternatively, the seal can have at least one sealing gasket positioned in a sealing gasket formed in the seal body and an insulating gasket positioned to restrict the flow of seal-degrading electrical currents in the seal.